

(WO 0077509, P10/L10-30)

Lift-off procedure: The selectively metallizing plastic component is coated with a photoresist. This photo must be the plastic part metallizing not or only slightly anlösen. For PMMA, PS and PC has, for example, a photo of the company ALLRESIST, Berlin (AR 5300 / 8) proved suitable. After exposure and development of metallizing structures is the application of metallic layers in a sputtering. The application of the chrome oxide coating carried out during the Sputter process by the injection of oxygen in the typically used the argon plasma sputtering. As Sputtertarget is a conventional chromium target used. Typical chromium oxide layer thicknesses are 10-50 nm Alternatively, you can directly target chromium used. The sputtering of platinum or its alloys or gold is then directly under standard conditions, ie argon plasma performed. As beneficial for the adhesion of chrome oxide coating is also a sputtering before the Chromoxides carried out back sputter the plastic material in an oxygen / argon (about 5 vol% / 95 vol%) plasma proved. In the actual lift-off process, the remaining photoresist and with that the paint on the metal layer located in a developer company ALLRESIST (AR 300-26) of the plastic component replaced.

(WO 0077509, P11/L1-7)

Shadow mask technique: The selectively metallizing plastic part is a so-called shadow mask covered. This has to be cut metallizing areas. Through it to the metal layers in analogy to the lift-off procedures sputtered. The advantage of this method is much simpler to implement, because the photo-processing deleted. The adhesion of the electrodes with the lift-off technology comparable.

(WO 0077509, P11/L9-20)

Dimensional structure of metallic layers: On a selectively metallizing plastic part will be entirely a metal layer in analogy to the already described sputtering process. This process is used in subsequent steps, either by selective removal means such as laser ablation (gold and platinum), or for example by selective wet chemical etching, structured. To structure using wet chemical etching is to start with a metal layer photoresist (Hoechst AG, Germany; AZ 5214)

upset, exposed and developed.

Gold will be in cyanide solution in the exposed areas removed.

The electrically non-conductive layer of chromium left behind. Finally, the remaining photoresist with a developer (eg, AR 300-26, Fa

ALLRESIST, Berlin) replaced.

(WO 0077509, P11/L22-28)

The adhesion of chromium as well as with chromium oxide layer sputtering technology by means of electrodes was produced with the help of leaving test reviewed. The adhesive strength of the chrome oxide coating is significantly larger. Even with ultrasound treatment in alkaline solution, the metal layers, with chromium as an adhesive layer were produced, compared with metal layers, with chromium as an adhesion layer made clear resistant.

(WO 0077509, P11/L30-P12/L26)

After production and preparation of the individual components are in accordance with the invention processes. Preferably is a component, the substrate, and with micro-holes or cut back on filling the channels and / or contact the electrodes provide. Furthermore, also called the use of a seal, ie a channel structures enclosing full survey on the substrates with heights typically between 0.5 to 5 Rm, in terms of Sticking together process

be very beneficial. The other component of the lid, and is intended to cover, for example, in electrophoretic analysis systems with which the electrodes. In this case, the lid is as inventive as electrode cap means. Since the invention as not only the production of measuring and control device applies to the analysis systems can be certain applications of systems of this preferred arrangement functionalisation of different components require. In this case, for example, more than two components, for example, two caps and a substrate etc, together, to discuss each other channel is to create structures, or other functions, such as detection systems, reaction chambers, etc., in which components are integrated. According to invention, all parts of the flow unit of the analysis system, using a bonding process together, designated as components. You can micro, with electrodes or provide other functionality. A subdivision of

the components in the substrates and electrodes lid or cover, if the corresponding component with electrodes, can be used only for a more detailed description of the execution form of special components and provides no restriction on other properties of the components, such as micro-structuring, etc., or their combination with each other dar.

(WO 0077509, P12/L28-P13/L2)

In a preferred form of execution, the analysis system consists of two parts. A component, for example, the substrate is microstructured and shows the channel system and other recesses to connect additional functionality, such as fluidic connections on. This component is using a molding process produced. The holes to fill the channels and / or contact the electrodes are here directly by bulges in the mold is created.

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